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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,718	03/17/2004	Yuri Hiraiwa	TSM-36	1887

7590 01/05/2007  
MATTINGLY, STANGER & MALUR, P.C.  
SUITE 370  
1800 DIAGONAL ROAD  
ALEXANDRIA, VA 22314

EXAMINER
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KIM, DANIEL Y

ART UNIT	PAPER NUMBER
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2185

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/801,718

Applicant(s)

HIRAIWA ET AL.

Examiner

Daniel Kim

Art Unit

2185

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6 is/are allowed.
- 6) ☒ Claim(s) 5 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 9-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.


## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

  
**STEPHEN C. ELMORE**  
**PRIMARY EXAMINER**

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is in response to applicant's communication filed November 21, 2006 in response to the PTO Office Action mailed July 21, 2006. The applicant's remarks and amendments to the claims and/or the specification were considered with the results that follow.
2. In response to the last Office Action, claims 1-3 and 5-6 have been amended, claims 7-10 have been added, and no claims have been cancelled. Claims 1-10 remain pending in this application.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

4. Claims 9-10 are objected to because of the following informalities:

In claim 9, line 9, the language "the second volume and. the third volume" appears to contain a typographical error in that a period was included and used incorrectly. It is suggested that the period be removed from the phrase.

Further, in line 12, the language "there exist a related copy group" appears to contain a typographical error and that this language should replace "exist" with "exists".

In claim 10, line 15, the language "there exist a related copy group" appears to contain a typographical error and that this language should replace "exist" with "exists".

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 5 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter because the claims are not limited to physical embodiments of a computer program product.

In line 1, a "program" is not limited to a physical embodiment because it encompasses only a program, **per se**. While it is understood in lines 4-5 that "said program causes the processor unit to execute steps", there is no language that describes the abstraction "program" to be embodied on any physical medium such as recordable-type media, i.e., a floppy disk, a hard disk drive, a RAM, CD-ROMs, DVD-ROMs", etc. While a computer program that is being executed by a processor may execute steps of a method, software **per se** may not be interpreted as a method, nor, in this case, an apparatus or any other form of useful, concrete product.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 5 is rejected under 35 U.S.C. 112, first paragraph because it lacks the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility. That is, the program **per se** cannot be said to accomplish any useful purpose since it has no physical embodiment and has not been executed.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. In claim 7, lines 7-8, the language "the information manages for managing", "which is be supplied", and "an application operated on the computer as a virtual volume" are instances of non-idiomatic English that make the scope of the claim ambiguous. Further, the "as a" language in line 8 makes it unclear as to what is being referred to, because neither an "application" nor a "computer" can be a "virtual volume".

Further, in lines 12-13, the language "being" and "among volumes" is ambiguous because it is unclear what element "being" is referring to, or what element is "among" the volumes.

Further, in lines 20-21, the language "in the first volume to be added" is ambiguous because it is unclear if the "first volume" itself is being added (and if so, to what element it is being added) or "information indicative of the first volume in the copy definition information" as per lines 16-17.

Further, in lines 23-25, the language “when the information indicating the first volume which is different from the first volume contained in the virtual volume is stored in the copy definition information” is ambiguous because it is unclear what is “different” between volumes.

**In claim 8**, lines 5-6, the language “adding the second volume to the copy definition information” is ambiguous because the “second volume” itself cannot be added to any sort of information.

**In claim 9**, lines 3-4, the language “being” is non-idiomatic because it is unclear what is “being” and its relationship to the “second volume”, “third volume”, and/or “copy destination”.

Further, in lines 13-14, the language “is set” is ambiguous because it is unclear what is “set”.

Further, claim 9 inherits the deficiencies of claims 7 and 8, and is rejected under 35 U.S.C. 112, second paragraph for the same reasons.

**Claim 10** also inherits the deficiencies of claims 7 and 8, and is rejected under 35 U.S.C. 112, second paragraph for the same reasons.

Appropriate correction is required.

#### ***Allowable Subject Matter***

11. The following is a statement of reasons for the indication of allowable subject matter:

**In claim 1**, lines 20-22, no prior art of record or combination thereof describes "a first comparing step which compares the identification information list read out in the identification information reading step, and the first duplication definition information read out of in the first reading step".

Claims 2-4 indicate allowable subject matter as a result of their dependencies, whether direct or indirect, on claim 1 and because they contain additional allowable features therein.

**In claim 6**, lines 10-12, no prior art of record or combination thereof describes "a comparing means which compares the identification information list stored in said first storing means, and the duplication definition information stored in said second storing means".

**In claim 7**, lines 14-15, no prior art of record or combination thereof describes "a comparing step which compares the disk subsystem configuration information with the copy definition information".

Claims 8-10 indicate allowable subject matter as a result of their dependencies, whether direct or indirect, on claim 7 and because they contain additional allowable features therein.

#### ***Contact Information***

12. Any inquiries concerning this action or earlier actions from the examiner should be directed to Daniel Kim, reachable at 571-272-2742, on Mon-Fri from 10:00am-


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6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah, is also reachable at 571-272-4098.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information from published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. All questions regarding access to the Private PAIR system should be directed to the Electronic Business Center (EBC), reachable at 866-217-9197.

DK

12-27-06

  
**STEPHEN C. ELMORE**  
**PRIMARY EXAMINER**